WHITING RAISED FOOTROPE

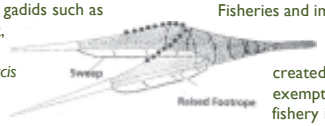
PROBLEM:

Whiting (a.k.a. silver hake, *Merluccius bilinearis*) is an abundant resource in the Gulf of Maine, but opportunities to fish for whiting were limited due to concerns regarding the bycatch of other species. Being smaller than other, more common gadids such as Atlantic cod, haddock, and pollock, whiting (and red hake, *Urophycis chuss*) are targeted using relatively small mesh, which increased concern over the potential bycatch of large-mesh regulated species such as cod, haddock, and yellowtail flounder. The Northeast (NE) Multispecies Fishery Management Plan (FMP), which initially prohibited small mesh fishing in the Gulf of Maine, provided for exemptions if it could be demonstrated that a small mesh fishery could operate with very low levels of bycatch of large-mesh species.

SOLUTION:

The fishing industry, in collaboration with the Massachusetts Division of Marine Fisheries (MADMF), began in 1994 to develop new whiting gear that could reduce the bycatch of large-mesh multispecies to below the required level in order to qualify for an exemption under the FMP.

In 2000, the New England Fishery Management Council, on the recommendation of MADMF and the fishing industry, adopted Framework Adjustment 35 to the NE Multispecies FMP to establish a seasonal whiting raised footrope trawl fishery in upper Cape Cod Bay. The Framework Adjustment, approved by NOAA Fisheries and implemented in August 2000, created an exempted whiting fishery in upper Cape Cod Bay from Sept to Nov. Vessels wishing to participate in this fishery must obtain a Letter of Authorization and abide by all gear requirements concerning the raised footrope trawl. In Nov 2002, NOAA Fisheries expanded the raised footrope trawl exemption area to include waters to the east, just off the northeastern side of Cape Cod, and extended the season for the additional area through the end of Dec. The whiting raised footrope trawl continues to be used in additional whiting exemption area fisheries in the Gulf of Maine (Small Mesh Area 1, Small Mesh Area 2, and the Gulf of Maine Grate Raised Footrope Trawl Fishery), and serves as a model for creating a workable bycatch solution that promotes fishing opportunities while minimizing bycatch.



SCALLOP DREDGE GEAR

PROBLEM:

Various types of fishing gear have been documented as capturing loggerhead sea turtles, which are listed as threatened under the Endangered Species Act. Fisheries observers deployed on sea scallop fishing trips into the reopened Hudson Canyon closed area documented takes by sea scallop dredge gear in 2001 and 2002.

SOLUTION:

In addition to other efforts undertaken to reduce mortality of sea turtles captured by scallop dredge gear, there have been cooperative efforts over several years to develop a modification to the gear so that sea turtles will not be captured:

- Researchers from Virginia Institute of Marine Science and Coonamessett Farm developed a proposed gear modification, in consultation with industry members;
- Scallop vessel owners provided volunteer vessels to conduct the initial experimental work;
- NOAA Fisheries provided direct financial support, as well as trained observers on vessels using the experimental gear;
- The Sea Scallop Research Set-Aside Program established in the fishery management plan by the New England Fishery Management Council provided support for research activities.

HARBOR PORPOISE TAKE REDUCTION

PROBLEM:

In the late 1980s and early 1990s, information suggested that several thousand porpoises per year were being incidentally entangled and drowned in gillnet fisheries in the Bay of Fundy, Canada, and in waters off New England.

The Gulf of Maine harbor porpoise take reduction team recommended seasonal fishing closures in high bycatch areas and management zones in which gillnets had to be equipped with pingers.

SOLUTION:

Pingers are soda-can sized devices that emit periodic sound pulses at specified frequencies to try to keep porpoises away from nets. Based on a scientific study, it has been shown that, when attached to bridles between each net panel that makes up a gillnet string, pingers can reduce bycatch by up to 90 percent. Although it is unclear precisely how much of the bycatch reduction is due to either one of these two sets of measures, it seems likely that harbor porpoise bycatch is currently at a sustainable level.

SCUP GRAS

PROBLEM:

The need to reduce mortality on the scup (*Stenotomus chrysops*) stock was identified in the report of the 19th Northeast Regional Stock Assessment Workshop (SAW), which indicated that the stock was overfished and at near record-low abundance. Although the maximum age for scup is estimated to be near 20 years, most of the population at the time of the 1995 assessment was comprised of age 0-2 fish. Scup discards, particularly from the directed scup and *Loligo* squid fisheries were identified as a major source of age 0-2 scup mortality.

SOLUTION:

In response to the 1995 assessment, restrictive management measures were put in place beginning in 1996 to reduce fishing mortality on undersized scup in the directed scup fishery. In addition, in March 2001, two gear-restricted areas (GRAs) were established to address scup mortality associated with commercial discarding. Commercial trawlers fishing for scup and *Loligo* squid as well as black sea bass or whiting in the GRAs during the effective times are required to use nets with a minimum 4.5 inch diamond mesh codend. The southern GRA is in effect from Jan 1 to Mar 15 and the northern GRA is in effect from Nov 1 to Dec 31. The area/time combinations which comprise the current GRAs represent the latest iteration in a series of GRA definitions established between May 2000 and March 2001. Information that provided the basis for the GRA definitions came from the 1989-1999 sea-sample data as well as from the fishing industry.